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AUG 23 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Jaffee et al

Art Unit: 1771

Serial No. 10/718,007

Case Docket No. 7237

Filed: November 20, 2003

Examiner: Torres Velazquez, Norca Liz

For: METHOD OF MAKING TOUGH, FLEXIBLE MATS AND TOUGH, FLEXIBLE MATS

Commissioner of Patents and Trademarks

Washington, D. C.

Dear Sir:

Preliminary Amendment and Rule 1.132 Declaration

In response to the Final Office Action mailed March 14, 2006 and the Advisory Action mailed June 12, 2006, please amend the application as follows:

Please insert the following paragraphs for the paragraph spanning pages 2 and 3 and the first complete paragraph on page 3 of the specification.

The mats of the present invention comprise a blend of fibers comprising about 98 to about 65 wt. percent, preferably about 80 to about 95 weight percent and most preferably about 92 to about 84 wt. percent glass fibers and about 2 to about 35 wt. percent, preferably 5 to about 20 wt. percent and most preferably about 8 to about 16 wt. percent man-made polymer fibers in a nonwoven web, the fibers in the web being bound together by a cured binder that comprises before drying and curing a homopolymer or a copolymer of polyacrylic acid and a polyol. The glass fibers can have a diameter of about 8 to about 20 microns, including diameters in the range of about 16 +/- 1.5 microns and in the range of about 13 to about 17.5 microns. The amount of binder in the finished mat is preferably in the range of about 10 to about 35 wt. percent, based on the weight of the dry finished mat, more preferably within the range of about 15 to about 32 wt. percent and most preferably about 25 +/- 5 wt. percent. This mat also had excellent recovery after being scored and folded. It could be folded many times, held in a folded condition for extended periods and still would spring back to a vertical orientation in the web of the ceiling panel of the type disclosed in U.S. Published Patent Application No. 20020020142.

It has been discovered that the combination of using a blend of glass fibers and polymer fibers with the binder formed from a homopolymer or a copolymer of polyacrylic acid and a polyol produces a fibrous nonwoven mat having unexpected high tensile strength and recovery after scoring and folding, and also an unexpected high flame resistance considering the amount of oxygen in the binder. When making mats for use in the compressible ceiling panel mentioned above, it is preferred that the mats have a degree of cure, i.e. its wet tensile strength divided by its dry tensile strength multiplied by 100 that equals at least 35 percent, more preferably at least 40 percent. Mats of the present invention pass the National Fire Protection Association's (NFPA) Method #701 Flammability Test. Taber stiffness of these mats is greater than about 40 gram centimeters, preferably greater than about 50 and most preferably greater than about 55. Air permeability of the mats are preferably within the range of about 500 to about 700 CFM/sq. ft. When the term "substantially free of phenol formaldehyde and urea" is used it is meant that none, or so little, is present that the mats pass the NFPA Flammability Test.